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RELATING TO

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INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

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Notes on the Birds of Italy and Sicily, made in 1853.

By Robert Birkbeck, Esq.

Having observed a list of the birds noticed by Mr. Sclater, in the market at Rome, in your last number (Zool. 4160), I am induced to send some remarks on the birds which I either saw, or procured, in Italy and Sicily, during the early part of last year. There are, as Mr. Sclater justly observes, very few birds to be seen on the Continent, unless long rambles are taken among the mountains and valleys, where many rare and shy birds may be seen. I frequently went with the cacciatori (fowlers) who know their haunts, and from whom may often be collected much interesting information.

I was very sorry to have spent only five weeks in Sicily, as I think it is one of the most interesting places in Europe for Ornithology; its extensive ranges of mountains being an asylum to the birds from the unrelenting cacciatori, who allow them no rest in the plains and gardens.

I was at Rome in May, which is too late in the season, there being most in the market during March and the beginning of April; I procured, however, several rare birds.

I believe that there is no bird-stuffer either in Rome or Florence, and only one in Naples; but there is a very good one in Genoa, where all the birds of Liguria may be obtained. I did not pay so much attention to the Sylviadæ and smaller birds as I did to the Raptores.

The species marked with an asterisk have not been observed in the British Isles.

*Vultur cinereus. This vulture is occasionally procured in Sicily.

*Aquila brachydactylus. I skinned two specimens at Rome: in the throat of one of them was a snake four and a half feet long. I also saw several soaring over the Campagna. I bought two at Genoa; they are common in Liguria, in the spring.

*Falco Eleonoræ. It is sometimes met with in Italy and Sicily.

*Falco tinnunculoides. I procured one specimen at Messina, and hope to obtain three more from the same place. Rather rare in Sicily.

Falco rufipes. I skinned three at Rome. When I was at Tivoli, I saw a pair of these beautiful hobbies, which had their nest on a tall poplar; they circled over my head, uttering loud shrieks. I procured several in Sicily, where they are generally common, though occasionally very rare.

Pernis apivorus. I skinned a beautiful specimen at Rome.

BRITISH MUSEUM

Noctua Passerina. One of these birds lived in a hole of the wall, opposite our hotel, at Rome, always quitting it before dusk. Rather common.

*Noctua acadica. There are several of these rare birds in the Museum at Florence, which is very rich in Raptores.

Bubo maximus. I obtained one at Nice. They breed in Ligria.

Scops Aldrovandi. Common.

Nucifraga caryocatactes. Rather rare in Italy.

*Pyrrhocorax alpinus. I obtained a fine specimen at Genoa. It is common in Liguria.

Coracias garrula. Common in the summer. I observed a pair flying across the Campagna, their wings shining splendidly in the sun.

Oriolus galbula. Very common at Naples, in May.

*Sturnus unicolor. I procured several skins. It is common in Sicily, Sardinia, Corsica, and the adjacent islands.

Pastor roseus. Not rare in Sicily.

Lanius excubitor. Not rare.

*Lanius meridionalis. Rare; I could not obtain a specimen of this shrike in Italy.

*Lanius minor. I obtained one at Messina and one at Genoa.

Lanius rutilis, and L. Collurio. Common.

*Muscicapa albicollis. Not rare.

Turdus saxatilis. I obtained six specimens of this beautiful thrush, which is not rare in Sicily and the South of Italy.

Sylvia suecica. Not very rare.

Alauda cristata. This lark is common, very tame, and may be seen running about on the Campagna, with its crest elevated.

Cuculus glandarius. An occasional wanderer to the south of Italy and Sicily.

Picus martius. Very rare in Sicily. Quite common at Naples in April, though never seen in other months.

Picus viridis. In the Museum at Pisa, I observed three or four specimens with the feathers on the rump and neck quite flame-coloured, and those on the back of a bright yellow, similar to the specimen noticed by Mr. Gurney, in the 'Zoologist,' (4800). Some were brighter in colour than others. I think that they were distinguished as varieties of P. viridis.

*Picus medius. Not uncommon.

*Tichodroma phænicoptera. This beautiful creeper is not rare in Italy, but I was not fortunate enough to see it alive.

Upupa Epops. Common.

Merops apiaster. Not rare. I skinned one at Rome.

*Merops Savignii. Occasionally seen amongst the last-mentioned.

*Hirundo rupestris. Not uncommon in the Ligurian mountains. When at Nice, in January, on several fine days, I saw some small swallows (like H. riparia), hawking for flies, near the sea.

Cypselus alpinus. I saw a great many at Palmero, about March 26th; not rare in Liguria.

*Perdix Francolinus. Not rare in the two Sicilies.

*Perdix Græca. Common.

Glareola torquata. Not uncommon. I procured several specimens in Sicily.

Otis tetrax. Common in Sicily: I procured two skins.

Ardea alba. Rare in Sicily.

„ garzetta. I obtained one at Naples.

„ ralloides. I procured two very fine specimens at the last-mentioned place.

Ibis falcinellus. I saw one flying over head, near Messina, and skinned one at Catania, in Sicily.

ROBERT BIRKBECK.

Keswick, Norwich, January 14, 1854.

Note on two Brown Eagles.—Two brown eagles, from Killarney, have been in the possession of the Rev. H. B. Knox for the last fourteen years till last Sunday, when the more powerful destroyed his companion, picked off all his feathers, and had eaten the flesh from the breast-bone before his cannibalism was detected. They had been fed the day before with a still-born pig, and appeared completely gorged. Stray waifs of all sorts of dead animals have been constantly supplied as parochial perquisites by the parishioners, and there was no suspicion that they had been underfed.—*J. S. Henslow; Hitcham, Suffolk, February* 22, 1854.

Rough-legged Buzzard killed on the North Tyne.—A pair of these irregular migrants have been procured on the North Tyne during the winter. One was shot in November, and the other caught in a trap, towards the end of January last.—*Thomas John Bold; Angas' Court, Bigg Market, Newcastle-on-Tyne, February* 7, 1854.

Carnivorous Propensity of the Great Gray Shrike.—I procured a great gray shrike on the 21st of December last, in the act of carrying a skylark in its feet, which it had flown about with for some time previous to my shooting it. The lark was hardly half an ounce lighter than the shrike.—*H. T. Partridge; Hockham Hall, near Thetford, Norfolk, March* 4, 1854.

Occurrence of the Shore Lark (Alauda alpestris) *in Yorkshire.*—I have a fine specimen of this rare bird, which was shot at Filey, on the Yorkshire coast, in the early part of March, 1853; a second was seen at the same time, but was not obtained. I observe in a "List of the Birds of Cumberland," which appeared in a late number (Zool. 4166), that the shore lark is called "common;" this surely must be a mistake: if the bird has occurred in that county, the particulars of its capture would be well worth recording.—*Thomas H. Allis; York, February*, 1854.

Notes on the Ring Ouzel (Turdus torquatus), *&c.*—A specimen of the ring ouzel is in my possession, and was caught by a bird-catcher, of whom I frequently buy birds. Very great numbers of the kestrel (*Falco Tinnunculus*) immigrate here in the autumn; I might have bought any numbers last year at from 3*d.* each of the bird-catchers. I also procured, from the same source, a fine specimen of the sparrow-hawk (*Falco Nisus*), male, which I have preserved: it is one of the most perfect specimens I have seen. In Chiswick, also, I have procured a specimen of the carrion crow (*Corvus Corone*), which was shot a short time since by a man, who, by the same shot, killed another which was fighting with the one I have. A specimen of the goosander or dun diver (*Mergus merganser*) was also shot at Chiswick, which I have.—*John Dutton; St. Peter's Place, Hammersmith, February* 16, 1854.

Note on the Hawfinch (Fringilla coccothraustes).—It is quite common in the vicinity of Chiswick. They frequent the market-gardens, and feed on the stones of fruit, berries, &c. I have six specimens by me, and should be happy to exchange one or two pair (stuffed) for a similar number of the crossbill or pine grosbeak, stuffed, or in the flesh.—*Id.*

Occurrence of the Hawfinch at Oatlands.—On Christmas day I had a hawfinch for some time upon the lawn, picking up the haws under a red thorn tree, and but for its singularly large head, I think it most likely I might have mistaken it for a chaffinch, the male bird of which, in fine summer plumage, it greatly resembled at a little distance.—*W. C. Hewitson; Oatlands, March* 4, 1854.

Note on Abnormal Variations of Plumage in the Common Bulfinch, Common Pheasant, and Red-breasted Merganser.—Last autumn a gentleman presented me with a bulfinch entirely black, which had been found of that colour, in a nest containing three other young birds all of the ordinary colour. This bird has subsequently moulted, and in doing so has totally lost its black colouring, and has assumed the ordinary plumage of the female bulfinch. In the year 1852 my gamekeeper caught in my plantations a hen-pheasant, which, to a considerable extent, had assumed the plumage of the male bird about the head and neck: this bird was placed in a large cage in my garden, and in the course of last autumn quite lost the male plumage it had previously attained, and resumed its ordinary female dress. I lately saw a red-breasted merganser which had been killed on the Norfolk coast, and which was in the female dress, but showed a considerable amount of black plumage about the head and neck. I imagined this to be a young male bird commencing the assumption of the adult dress, but on dissection, I found it to be a female, and without any signs either of disease or exhaustion of the ovarium.—*J. H. Gurney; Easton, Norfolk, January* 27, 1854.

Singular conduct of a Stock Dove.—Mr. Gould has made us acquainted with a bird, which, for its own amusement, builds itself a bower. Mr. Wallace tells me that the cock of the rock will select a piece of open green in the forest, and, in its full dress of gorgeous orange, hold a dance with its companions. I have often seen tame pigeons put themselves in most ludicrous attitudes, and the Tommy Noddy (the puffin) do the same thing; but until this winter I never saw a bird practising gymnastics for its own amusement. The ring and stock doves are sometimes numerous here during the winter, and I have had dozens together upon the lawn, but being much shot at, they will not readily allow any one to come near them. I was, therefore, one day much surprised to find myself within a few yards of a stock dove, which was so much engrossed by its novel occupation as not to notice my approach. It was busy picking up acorns, one or two of which it swallowed; but placing its head backwards till the crown touched its back, as I have seen storks do, and leaning back at the same time, so far as sometimes to have to raise its wings to maintain its equilibrium, it dropped the acorn over its own tail. This it did repeatedly, till, tired of watching it, I walked close up to it, when it made a very clumsy effort to fly away, and did not recover itself before it had come forcibly in contact with two trees. The bird had the appearance of being intoxicated.—*W. C. Hewitson; Oatland, March* 4, 1854.

Note on a Hybrid between a Black Grouse and Pheasant. — To the thirteen examples of the black grouse having bred with the common pheasant, I have now the pleasure of adding a fourteenth. At the beginning of the present month, a bird was shot in a large wood, called "Staunton Springs," near Melbourne, by the keeper in the service of the Earl Ferrers. It came several mornings to feed with a number of pheasants which haunted the wood, and was very tame. Upon examination, I find it to be a hybrid between the species which I have mentioned. It resembles in form almost precisely that of the bird represented at page 311 of Yarrell's 'British Birds.' It is somewhat pheasant-like in shape, more especially about the head, but has white tips upon the shoulder of the wings, and the legs are partly feathered. The tail is a sort of compromise between those of both birds, being shorter than the pheasant's and longer than that of the grouse, and fan-like in figure. But how can this union of species have taken place? The black game is an entire stranger in these parts, no example, probably, ever having been seen here nor within dozens of miles of us. I should mention that this specimen has been beautifully preserved by Mr. Cook, of Derby, for the Earl Ferrers. — *John J. Briggs; King's Newton, Derby, February* 20, 1854.

Occurrence of the Little Bustard (Otis tetrax, *Linn.*) *in Dorsetshire.*—On the 26th of December a fine old female specimen was shot on Fosshill Common, Winfrith, a village situated between Weymouth and Wareham; it was brought to a bird-stuffer, of Weymouth, for preservation. I do not find any record of this bird having hitherto been obtained in the county, with the exception of a notice supplied me by my friend O. Pickard-Cambridge, Esq., of a female, which was shot some years since in a turnip-field, at Warmwell, about five miles from Winfrith: this bird was sent to Bullock's Museum, and from thence to the British Museum.—*William Thompson; Weymouth, February* 10, 1854.

Occurrence of the Little Bustard (Otis tetrax, *Linn.*) *in Lincolnshire.*—B. H. Brown, Esq., shot a specimen of the little bustard, in a turnip-field, on Welbourn Heath, Lincolnshire, on the 30th of last January. He brought it to Newark to be mounted, when I had the pleasure of seeing it in the flesh. I may take this opportunity of mentioning that a little bustard was shot within eight miles of Newark, in the county of Nottingham, about eight years ago, by Banks Wright, Esq., of Shelton.—*W. F. Foottit; Newark, Notts, February* 3, 1854.

Occurrence of the Little Bustard in Norfolk.—I had lately the pleasure of examining, in the flesh, a fine male specimen of this rare visitor; shot on the 29th of December, in a turnip-field, on the road leading from Winterton to Yarmouth. This bird was in good condition, the stomach being literally crammed with vegetable matter, apparently fragments of some large leaf, with a rough surface and serrated edge. The

Rev. Richard Lubbock, in his 'Fauna of Norfolk,' observes, that in three instances of the occurrence of this bird coming under his notice, "it has without variation been found in a turnip-field." I find that your correspondent Mr. Rodd, of Penzance, in recording (Zool. 4179) the appearance of several other specimens recently in Cornwall, mentions that the wind had been S. or S.E. for some days; at the time, however, when the present example was procured, and for some days previously, the wind was either N. or N.E.—*H. Stevenson; Norwich, January* 28, 1854.

Occurrence of the Little Bustard in Yorkshire.—A female specimen of the little bustard was shot on the 19th inst., by the Rev. W. Blow, at Goodmanham, on the Yorkshire Wolds. It has been beautifully mounted by Mr. D. Graham, of York.—*Thomas H. Allis; York, February*, 1845.

Occurrence of the Common Bittern (Botaurus stellaris) *near Warrington.*—A fine male specimen of this bird was shot at Thelwall, on the bank of the Mersey, on the 12th ult., by Mr. James Taylor, and has been presented to the Warrington Museum by Henry Stanton, Esq.—*Nicholas Cooke; Penketh, near Warrington, February*, 1854.

Occurrence of the Common Bittern (Ardea stellaris) *at Chiswick.*—A fine specimen of the bittern was shot at a place called "Jessop's Eyot," Chiswick, on the 7th of January last, by a man who sold it to me in the flesh; I was also informed by the same person that another was shot by the toll-keeper at Kew Bridge, about the same time, and that he also saw it in the flesh. I believe it is a very rare occurrence for the bird to be met with in this neighbourhood.—*John Dutton; St. Peter's Place, Hammersmith, February* 16, 1854.

Bartram's Sandpiper as a British Bird.—As no further notice has been taken of the sandpiper described some while ago in the 'Zoologist' (Zool. 3330), by Mr. Reid, nor have the conjectures offered at the time been since confirmed, I am induced, in the absence of a better account, to lay before the readers of the 'Zoologist' what information I have obtained on the subject since I have been in Doncaster. His attention once called to the 'American Ornithology,' Mr. Reid soon satisfied himself that his bird could be no other than Bartram's sandpiper, agreeing, as it did, in the most minute particulars, with Wilson's description: and the very remarkable character exhibited in its wedge-shaped tail, leaves no doubt as to the identity of the bird. It is the Tringa Bartramia of Wilson, Am. Orn. vol. ii. 353; Totanus Bartramius of Temminck, Man. d'Orn. ii. 650, and of Bonaparte, Synop. 325; and is well-figured in Gould's 'Birds of Europe.' The circumstances under which the present individual was found, agree so far exactly with what are said to be its habits in America: and indeed Mr. Barnard, the gentleman who sent the bird to be preserved, was particularly surprised that it should have occurred "so far inland, sitting on a bean-stubble, and in a place near to which there is no water." The locality was near Warwick, not Warrington; and this unique specimen I understand still remains in the possession of R. T. Barnard, Esq., of Kinton Hall, near that city, to whom it was brought in the first instance by the man who shot it. So many of the American Tringidæ have already been enrolled as British birds, that the occurrence of one more species cannot be looked upon with much surprise; while in the case before us, the fact that Bartram's sandpiper has for some time been known as a straggler on this side of the Atlantic, will no doubt serve still further to justify its introduction into our Fauna. For this very interesting novelty we are indebted to the discrimination of Mr. Reid, who, when recording its description, felt confident his sandpiper had not hitherto been recognised as a British bird.—*A. G. More; Doncaster, February* 15, 1854.

Extraordinary Propensity of a Moorhen.—At the beginning of last July, the keeper having lost several pheasants about three weeks old, from the copse, and having set traps in vain for winged and four-footed vermin, determined to keep watch for the aggressor, when, after some time, a moorhen was seen walking about near the copse; the keeper, supposing that it only came to eat the young pheasants' food, did not shoot it until he saw the moorhen strike a pheasant, which it killed immediately, and devoured all the young bird, except the leg and wing-bones. The remains agreed exactly with those of eight found before. Perfect confidence may be placed in the correctness of this statement.—*H. T. Partridge; Hockham Hall, near Thetford, Norfolk, March* 4, 1854.

Occurrence of the Turf Scoter (Oidemia perspicillata, *Flem.*) *at Weymouth.*—In the month of December, 1853, a specimen of this rare scoter was shot in Weymouth Bay, close to the shore, and between Weymouth and Purton Coast-guard Station. The above specimen is a female; it was very difficult to kill, in consequenee of the facility with which it dived. The bird is very nicely preserved by Douglas Legg, of this town, and who has it for sale.—*William Thompson; Weymouth, February*, 1854.

Note on the Scarcity of Birds on the Continent.—With Mr. Sclater, I was struck with the singular absence of birds on the Continent. In passing up the valley from Pipinsterre to Spa, in excursions about Aix-la-Chapelle, in ascending the Drachenfells, in the valley of the Lahn going to Emms, about Wiesbaden, Schalbach, Schlangenbad, and in excursions to the valley of the Mierg at Baden, though always on the look-out, I saw but few; a hawk every now and then, one or two carrion-crows, and very often six or seven magpies together, apparently busily employed in plotting some mischief; no thrushes, blackbirds, or robins, and not a single skylark between Ostend and Boulogne. The Tythys or black redstart, which Mr. Sclater states to be abundant at Baden, I was not fortunate enough to observe.—*R. Wakefield; Sussex Place.*

Provincial Names of Birds in Devonshire and Cornwall.—The following are the provincial names of some of the birds in Devonshire and Cornwall which have come under my notice:—The peregrine falcon is called sometimes a "falcon," and sometimes the "blue hawk;" the kestrel, "cress hawk" and "wind-fanner;" kite, "fork-tailed kite;" buzzard, "eagle;" common dipper, "water-crow;" missel-thrush, "holm screech;" fieldfare, "blue birds;" redwing, "winnard" and "windalls;" song thrush, "gray thrush;" hedge accentor, "hedge sparrow;" stonechat, "furzechat;" whitethroat, "whitty beard;" great titmouse, "big hickmull;" blue titmouse, cole titmouse, marsh titmouse, "hickmulls;" tong-tailed titmouse, "long-tailed pies;" wagtails, "dishwashers;" common bunting, "bunting lark;" yellow bunting, "gladie;" chaffinch, "chinks," "silver finch," "copper finch;" greenfinch, "green linnet;" common linnet, "fiery linnet;" bullfinch, "hoop;" hooded crow, "market sea crow;" jackdaw, "daw;" green woodpecker, "woodwall;" common creeper, "tree climber;" wren, "tope;" ringed plover, "scanderling;" lapwing, "horniwinks;" oyster-catcher, "sea-pie;" golden plover, "whistling plover;" common sandpiper, "summer snipe;" dunlin, "sanderling;" great crested grebe, "great dabchick;" little grebe, "dabchick;" great northern diver, "loon;" red northern diver, "loon;" common guillimot, "willock" and "murre;" puffin, "sea parrot;" razor-bill, "murre;" all the terns are indiscriminately called "sea swallows;" all the skuas, "Tom Harries."—*Edward Hearle Rodd; Penzance, February*, 1854.

Suggestions for ascertaining the Causes of Death in Birds and Animals. By W. E. C. Nourse, M.R.C.S.

Excepting the peculiar subjects of veterinary surgery, systematic attention has not hitherto been paid to the natural causes of death in birds and animals. In the numerous and increasing zoological collections of this country, deaths constantly occur, entailing both vexation and loss upon the owners. In the wild state, also, birds and animals are often found dead without apparent cause, sometimes singly, sometimes in great numbers together. But in neither case are the causes of death much sought for, and if any examination is made, it is conducted on no regular plan, nor are its results preserved for comparison with other instances. Thus knowledge of a very interesting and useful kind runs to waste, and is lost merely for want of being gathered. I would suggest to all naturalists, owners of collections, and others interested in the subject, to omit no opportunity of examining the bodies of animals and birds that die, or that are found recently dead, without obvious cause, and regularly to book the results. I subjoin some notes on the mode of doing so, for the benefit of those gentlemen who may not be conversant with pathology.

1. Observe the outward appearance and condition; whether emaciated or not; any distortions, wounds, bruises, swellings, &c.; the healthiness or otherwise of the skin; the condition of the fur, feathers, or other outward covering; and whether much infested with vermin.

2. The heart is always the first thing to examine internally, as it shows the immediate or physiological cause of death. Note the quantity, colour, and consistence of the blood in each of the four cavities of the heart, naming those cavities separately and successively. As to quantity, whether each cavity is quite full, half full, or empty: as to colour, whether the blood is red or black; and as to consistence, whether it be fluid or coagulated.

This examination, every item of which should be carefully noted down, will determine the proximate cause of death, and point out the immediate physiological condition which killed that creature. For if the cavities of the heart be empty, death has been caused by deficiency of blood, from external or internal hæmorrhage, or from some other direct and immediate drain upon the system. If the cavities of the heart be full, the left auricle and ventricle with red blood, some sudden shock or severe impression on the nervous system has been the cause of death, such as a blow, a flash of lightning, violent pain from spasm or inflammation, &c. If all four cavities of the heart are gorged with black blood, that creature has died suffocated, whether from drowning, foul air, or other accident, or from disease of the lungs, or a comatose condition of the brain. These are instances of the conclusions which may be drawn from accurate examination of the contents of each of the four cavities of the heart.

Having made out the immediate condition which produced death, we must next seek within the body for whatever may have caused it. And even if the cause has obviously been something external, it will still be instructive to pursue our examination. The heart heing now under inspection, should therefore be examined for aneurism, dilatation, valvular disease, or inflammation of any part of it or its investing membrane.

3. The lungs, pleura, bronchial tubes, and larynx should be next examined, for inflammation, effusion, tubercle, &c., and for any mechanical obstruction of the tubes, or of the opening of the windpipe.

4. From the top of the larynx, the examination should be carried down the œsophagus into the stomach, looking for inflammation or other disease in passing along. The contents of the stomach, and their condition, should be always carefully noted, and their quantity ascertained either by weight or measure.

5. The liver should be now examined, then the abdominal cavity, peritonæum, intestinal canal, and other organs contained in the abdomen.

6. Lastly, if no cause of death has thus far been discovered, and indeed in every practicable case, examine the brain and spinal cord, especially looking out for signs of inflammation, dark venous congestion, or extravasation of blood.

This rough sketch of the things to be observed in examining any dead creature, may serve to guide those who have not had practical experience in such manipulations; for, though very incomplete, it hardly permits any ordinary cause of death among the lower animals to escape detection. And some such guide as this is needed; for, except in the limited area of veterinary art, the causes of death among those creatures are either not noticed at all, or in too imperfect a manner to answer any useful purpose. As far as my own leisure permits, I intend to take every opportunity of examining the bodies of birds and animals, carefully booking the results.

The examinations I have thus far made, though comparatively few, furnish hints for the management of living collections. I find that among birds, the diseases of which they die are seldom indicated with accuracy during life, and though often preventible, are also often incurable when once fully established. This shows that the mortality in collections is to be most certainly lessened by prevention. The medical treatment of sick birds is of little avail in the present state of our knowledge. But I also find that many deaths occur without much disease existing, merely from some temporary condition of the system; such, for instance, as suffocation, fainting, or inanition, from too long fasting, improper food, or eating too much at one time, from fright, over-exertion, cold, or exposure to the weather, from ill-ventilated houses, from resting in an unfavourable posture, from washing while in a weakly state, from accidental loss of blood, and from various other transient causes to be detected by observation, which suffice to kill a weakly bird; while the ailment from which the bird was suffering would not have sufficed to cause its death, but might, if the bird was cared for and sustained, have disappeared of itself. Thus are indicated the frequent administration of carefully selected food in small quantities at a time, the removal from water, except just what suffices to quench thirst, the confinement to a limited space, the quiet, warmth, shelter, and separation from other birds, the free access of air, and the absence of nooks and corners to mope in, which collectors well know to be essential to the safety of their sickly specimens. This resembles what is met with in medical practice, where every now and then the treatment has to be directed not against the disease, but against the tendency to death from trivial causes which it induces, from the weak state into which it throws the patient.

The observations now suggested, if continued and extended in the course of years, will, by-and-bye, indicate with accuracy the causes and symptoms of the maladies of birds and animals, and so lead to their prevention and cure. Nor is this all. A higher end will be obtained. Our knowledge of Natural History will be made more perfect, by learning to what diseases birds and animals are subject, and after what manner individuals and races die out. We shall also discover what diseases or causes of death are superinduced by a state of confinement, over and above those which are incident to the same creatures when living in their natural wild state. We shall then see how far such affections are analogous to those which occur in man, and by the light thus collaterally thrown upon them, the diseases of humanity, our knowledge of which is daily increasing, will be yet better understood; and thus, in the course of years, will be laid the foundation of a more widely extended Comparative Pathology, and of a clearer knowledge of the phenomena of life and disease.

W. E. C. Nourse.

8, Burwood Place, Hyde Park,
January 30, 1854.

Variety of Fishes exposed for Sale on the Continent.—Mr. Sclater's list of birds exposed for sale in the market at Rome, in January, 1853, recorded in your last number (Zool. 4160), brought to my mind the variety of fish I observed in the markets of Liege and Heidelberg, from the rivers Meuse and Neckar, during a tour through Belgium, France, and Germany, in August and September last. Our neighbours prize fresh-water fish much more highly than we do; and even the barbel, which is usually considered here as almost worthless, is held in much estimation by them. The fountains, in the fish-markets at Liege, have small tanks into which fresh water constantly flows, by which means the fish are kept alive for many days. In these tanks I observed barbel (*Cyprinus barbus*) in great numbers, from the weight of a few ounces to that of several pounds; chub (*C. cephalus*), some of a large size; roach (*C. rutilus*), dace (*C. leuciscus*), carp (*C. Carpio*), tench (*C. Tinca*), bream (*C. Brama*), gudgeon (*C. Gobio*), pike (*Esox Lucius*) of all sizes, and eels: salmon and trout seemed scarce, as I only observed them on one or two occasions. Another fish which was very abundant puzzled me not a little: at first I took it for the C. dobula, the dobula roach, figured in 'Yarrell's Fishes,' vol. i. p. 346, which is common in many of the German rivers; and it was not until my return home that I ascertained this fish to be the Cyprinus Vimba, figured in Bloch's 'German Fishes,' ed. 1787, vol. i., and called "Weiss fische," the name now given it in the market at Heidelberg, where it was quite as abundant as at Liege: this fish is of little worth for the table, being bony and insipid. I cannot find that it has ever been met with in any of our rivers; it is about the size of the roach, which in many respects it resembles, but it differs in the anal fin being larger, and the upper jaw extending over the lower, thereby making the mouth something like that of the barbel; if introduced into our rivers, which it readily might be, it would add much to the sport of the roach anglers. Travellers, when at Heidelberg, generally visit the Wolf's Brunnen, a pretty place, a short distance from the town, partly for the beauty of the scenery, and also to see the trout in the preserves there, some of which weigh four and five pounds a-piece, and are much esteemed for their fine flavour, and sell for half-a-crown a pound. They were fed while we were there, and it was interesting to see the avidity with which they seized a roach or dace, even before reaching the water. When served, as they frequently are, at the table d'hôte dinners, from their blue appearance, arising from the practice of boiling them in vinegar and water, some persons refuse to partake of them; but when the firm flesh and delicious flavour have once been experienced, they are seldom again guilty of the like enormity.—*R. Wakefield; Sussex Place.*

Note on the Lampern, or River Lamprey (Petromyzon fluviatilis).—Mr. Yarrell observes in his 'British Fishes,' vol. ii. p. 455, 1st. ed., that the spawning-season of this fish is May. About the middle of April of last year (1853), large colonies of its young were to be seen in the Burn of Blackton, parish of King Edward, Aberdeenshire;

some of which I obtained. They measured from five to six inches in length, and were of the thickness of a common writing-quill.—*George Harris; Gamrie, Banffshire, February*, 1854.

Note on the Anglesea Morris (Leptocephalus Morrisii).—During a storm which occurred in the Moray Firth about the middle of April last, no fewer than four specimens of this fish were cast ashore at Pennan, Aberdeenshire. One of these I secured, which was seven inches in length. A slight jag at the base of the tail on the upper surface, appeared to have the effect of making the tail point upwards, but it is possible that this may have been the result of an accident at a former stage in the creature's growth.—*Id.*

Note on the Twaite Shad (Alosa Sinta).—A very good example of this fish was caught in the Deveron, at Rack Mill, about a mile and a half from the sea, on the 2nd of September of last year.—*Id.*

Note on the Lesser Weever (Trachinus Vipera).—A very perfect specimen of this little fish was sent me from Pennan, in autumn last. In August, 1852, I received from one of the fishermen of Gardenston a very good example of the great weever. —*Id.*

Note on the Great Weever (Trachinus Draco).—This fish measured in length eleven inches. A specimen of one caught some years ago at Macduff, also in this parish, measured twelve inches, while that of the species last referred to, measured only about seven inches in length. Notwithstanding the opinion of my accomplished and esteemed friend the Rev. George Gordon, of Birnie (Zool. 3457), as well as that of other authorities, I cannot help being suspicious that there is something venomous in the larger dorsal spines of these animals, particularly in the case of the smaller one; but whether that may reside within the spine, or exist some way external to it, I do not hazard a conjecture. As the fishermen assert, there is certainly something *ugly* in the dingy dark of all the parts of the most advanced dorsal; and in addition, they all affirm that a wound from it is regularly followed by severe, and, in some cases, by even alarming symptoms. Such is stated to have happened in the case of the one found at Macduff, and I can bear testimony to similar effects in the cases of the other two here referred to, particularly in that of the lesser weever caught at Pennan. The man, upon whose line it was found, in taking it off the hook, was stung by it in the hand, and in less than half-an-hour the whole of the hand was considerably swollen: the swelling went on extending to the wrist, and the two middle fingers, being more in the line of the wound, were more swollen than the others. About an hour thereafter the hand had increased to twice its natural size, when, the doctor having been reached, free scarifications, with other proper means, proved effectual in arresting further morbid progress. The hand healed up perfectly within a reasonable period, and with very little of the character of a discharging sore. You will not therefore blame me in saying that I cannot help feeling, from the almost unvarying testimony of those who have had the best opportunities of seeing, as well as those who have experienced the effects of these wounds, together with what I myself have witnessed of them in this locality, that there is good reason for suspecting the existence of a peculiar *virus* or venom in the formidable thorny armour of this fish, its inflictions being followed by more rapid and higher inflammatory action than is seen to occur after a wound from a spicula of bone, or the spines of most other species of fish, and which appear to be too uniform to admit of explanation on the recognized grounds of diathesis or idiosyncracy of constitution.—*Id.*

Note on the Crested Blenny (Blennius palmicornis).—Several specimens of this fish have occurred to the east of this district in the Moray Firth. Mr. Peach has also obtained it at Peterhead.—*Id.*

Note on the Poor or Power Cod (Morrhua minuta). — This is abundant with us, though by some oversight it has not, so far as I have noticed, been included as a denizen of our waters.—*Id.*

Occurrence of the Four-horned Cottus, (Cottus quadricornis, *Linn.*)—On the 7th of this month I had a fine specimen of this fish brought me which had been caught in a seine in the backwater here; it is not a very large piece of tidal water, and a river runs in at the top, so that there is a large proportion of fresh water. The fish was forwarded to the Zoological Society's aquavivarium.—*William Thompson; Weymouth, February* 14, 1854.

List of Land and Fresh-water Mollusks found in the Neighbourhood of Ackworth, Yorkshire.[*] By Charles Ashford, Esq.

The Nomenclature of the following List is that of Gray's Turton's 'Manual.'

Bithinia tentaculata. Abundant; invariably covered with an earthy incrustation.

Valvata piscinalis. Abundant at Winterset reservoir (five miles south-west), and common here.

Arion ater. Common; of several shades between black and russet brown.

Limax maximus. Common, but generally not so large; I have often seen them in other districts.

„ carinatus. Several specimens once found together on a stone wall, after a wet day.

„ agrestis. Superabundant.

Vitrina pellucida. Of frequent occurrence, especially in early spring, at the bottom of hedges, among wet leaves, &c.

Helix aspersa. Common and voracious, as everywhere else.

„ hortensis. Occasional.

„ hybrida. Rare; one good specimen found under a stone a few days ago, with hortensis and nemoralis.

„ nemoralis. Common; one specimen was found marked with rich mahogany-like blotches instead of bands.

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[*] Ackworth is situate on the borders of the sandstone of the coal measures, with the magnesian limestone and new red sandstone within two or three miles.

Helix lapicida. Tolerably abundant among the fissures of the limestone rocks, at Went Vale.

„ pulchella. Pretty common; specimens of var. imbricata have been found in dry as well as marshy situations. (See Turton, p. 142).

„ Cantiana. Common, but local, being confined to a few hundred yards of hedging.

„ fusca. Not been found nearer than the woods by Doncaster, and can hardly be said to belong to this neighbourhood.

„ fulva. Tolerably common, at roots of grass in damp situations.

„ aculeata. Common among damp vegetable matter at hedge-bottoms.

„ granulata. Found in a small copse some years ago, but not lately.

„ sericea. Two or three specimens were found here last year by W. Robinson, of York.

„ hispida. Common, among loose stones, &c.

„ concinna. Abundant.

„ depilata? One or two supposed specimens.

„ rufescens. Common on a hedge-bank near Wakefield; I have all shades, from light horn to bright brown.

„ virgata. Abundant among the herbage near the Pontefract railway station, but comparatively small in size.

„ caperata. Not common.

„ ericetorum. Common at Went Vale, on limestone herbage.

Zonites rotundatus. Abundant, under stones.

„ pygmæus. Pretty common, at roots of damp and peaty grass.

„ alliarius. Occasional, beneath stones; strongly garlic-scented, especially when irritated.

„ cellarius. Common, in its usual haunts.

„ purus. Common, among decayed leaves, at hedge-bottoms, and in woods.

„ crystallinus. Ditto.

„ nitidulus. Very common, under stones, &c.

„ radiatulus. Occasionally found at roots of grass, in damp pastures.

„ lucidus. This beautiful shell occurs in unusual abundance among the stranded flags and Equiseta of Hemsworth Dam. The large specimens seem to be more or less corroded at the apex.

Zonites excavatus. Three specimens of this rare shell were unexpectedly obtained last year, from an old loose tree-stump, in the wood at Winterset.

Succinia putris. Occasional, but not by any means so abundant as S. Pfeifferi, which, though small, swarms in the same locality as Zonites lucidus.

Bulimus obscurus. Not common; perhaps overlooked from its power of concealment.

Zua lubrica. Common, at roots of grass, &c.

Achatina acicula. Several specimens of this shell from the limestone at Went Vale, but only two or three inhabited.

Pupa umbilicata. Common.

„ marginata. A few dead, but good specimens, from the moist earth of the same locality as Achatina acicula.

Vertigo. Some of these neat little shells have been obtained from the magnesian limestone crags at Went Vale, chiefly among the débris that has collected by the side of the rocks and become mixed with the vegetable mould and decayed leaves below. By filling a botanical case with this earth, and examining it at leisure, I have procured at one forage above one hundred and sixty specimens of pusilla (not many alive, but the shells in good condition), some thirty or more of pygmæa, and about fifty of edentula, besides two or three of substriata and cylindrica, with dozens of several commoner shells.

Vertigo palustris. A few score specimens from the wet grass, on the banks of Hemsworth Dam.

Clausilia nigricans. Common, in the woods among tree-moss, &c.

Carychium minimum. Common, at roots of mossy grass.

Limnæus auricularius. Not uncommon at Hemsworth and Winterset.

„ pereger and its variety lineatus. Common. The vars. acutus and lacustris not so common.

„ palustris. A few specimens from small field-pools.

„ truncatulus. Abundant in grassy ditches.

„ glaber. Abundant in one meadow-pool, confined to a few square yards. The peculiarity giving rise to var. lineatus, in L. pereger, I have observed in all the species of this genus.

„ fluviatilis. Not uncommon.

Velletia lacustris. Pretty common in one small pond, adhering to grass, &c.

Physa fontinalis. Abundant in the mill-pond.

Aplexus hypnorum. Not common.

Planorbis albus. Good specimens, from Hemsworth Dam.

„ lævis. Abundant, in one small depopulated fish-pond, adhering to Potamogeton crispus; some strange monstrosities.

„ imbricatus. Not common; found with Velletia lacustris.

„ carinatus. A few specimens.

„ marginatus. Common.

„ vortex. Common, in stagnant pools.

„ spirorbis. Ditto.

„ nitidus. This well-named species was common in an old fish-pond, among duckweed, a year or two ago, then nearly disappeared, but has since increased.

Cyclas cornea. Abundant, but small.

„ lacustris. Three specimens, obtained last year from a stagnant pool.

Pisidium nitidum. Common, in one small pool.

„ Henslowianum. Three specimens hitherto.

„ amnicum. Pretty common, in running streams.

„ cinereum? This, and pulchellum, I am not satisfied about. We find here, abundantly in one locality, a species we can refer only to cinereum.

Anodon cygneus. Carted for manure last year, from Nostatt Dam. I cannot speak to the varieties; there appear to be puzzling connecting links among them.

Unio Pictorum. Considerable numbers in the Went, near and in Went Vale.

„ tumidus. In same locality, but not so common as the last.

Dreissena polymorpha. In the feeding canal from the Winterset reservoir, attached in masses to stones, as usual, but almost every specimen corroded by the water.

CHARLES ASHFORD.

Flounder's Institute, Ackworth, near Pontefract,
January 27, 1854.

Suggestions for the consideration of Collectors of British Shells.—Might it not add to the interest of collections to have well-executed figures of the animals of such genera (as Arion) as have no shells, or (as Limax) as have scarcely any, so prepared as to admit of being cut out of a plate and inserted in the cabinet? Perhaps the animal of one species of a genus, or at least of a higher group, might be engraved and coloured (in the best style) for such a purpose. It adds very much to the interest of collections to intercalate woodcuts, models, or other representations of animals, which cannot well be exhibited, either from size, rarity, or (as among Mollusca) from the impossibility of preserving them otherwise than in fluids. A small subscription among shell-collectors would procure an engraving of such as it would be most desirable to have thus prepared, but they should be done in the very best style, or they would be worse than useless.—*J. S. Henslow; Hitcham, Suffolk, February* 22, 1854.

Occurrence of Doris bilamellata, &c. — I obtained a few specimens of this pretty Doris from eight or nine fathom water, amongst Cellipora cervicornis; also Doris tuberculata from the sides of the quay, at low-water-mark; and also one specimen of a Doris allied to D. ripanda.—*William Thompson; Weymouth, February* 14, 1854.

Occurrence of Lucernaria auricula. — I have lately taken a dozen or two of this pretty little zoophyte, being the first I have found in any numbers here.—*Id.*

NOTICES OF NEW BOOKS.

'*The Annals and Magazine of Natural History.*' No. 73, dated January; No. 74, dated February; and No. 75, dated March, 1854. London: Taylor & Francis, Red Lion Court, Fleet St. *Price 2s. 6d. each.*

The January number contains the following papers: —

'On the Structure of Echinoderms.' By Johannes Müller. Translated from the German by Thomas Huxley, F.R.S.

'On a new Species of Tanager in the British Museum.' By Philip Lutley Sclater, M.A.

'Descriptions of new or little-known Species of Reptiles collected in Ceylon.' By E. F. Kelaart, M.D., F.L.S., &c.

'Note on Spadix purpurea.' By Prof. Edward Forbes, F.R.S., &c.

'Descriptions and Illustrations of new Species of Verrucaria and Sagedia found about Torquay, Devonshire.' By Richard Deakin, M.D.

'Account of a M.S. of Laurence Theodore Gronov, lately purchased for the British Museum, with a Collection of Dry Fish which it describes.' By John Edward Gray. Ph.D., F.R.S., V.P.Z.S.

'A Catalogue of the Species of Ants found in Southern India.' By T. C. Jerdon, Esq., Assistant Surgeon, Madras Medical Establishment.

Bibliographical Notices: — 'The Palm Trees of the Amazon and their Uses.' By A. R. Wallace. 'The Botanist's Word Book: an Etymological and Explanatory Vocabulary of the Terms employed in the Science of Botany.' By G. Macdonald and J. Allan. 'A Narrative of Travels on the Amazon and Rio Negro, with an Account of the Native Tribes, and Observations on the Climate, Geology, and Natural History of the Amazon Valley.' By A. R. Wallace.

Proceedings of Societies:—Zoological—Botanical Society of Edinburgh—Royal Society of Edinburgh.

Miscellaneous: — On the Anatomy of Terebratula australis; by M. P. Gratiolet: translated from the 'Comptes Rendus' for July 11, 1853, p. 45. On the Teeth of Peronia and Otina; by J. E. Gray, Ph.D., &c. Habits of Birds; extracted from Wallace's Travels. On a Species of African Ant; by Dr. L. Imhoff: extracted from the Bericht Verh. Nat. Ges. 1852, p. 175. On a new Muscle-element in the Thoracic Muscles of Insects; by Dr. Burnett: extracted from Silliman's Journal for September, 1853. On Desmarestia pinnatinervia, *Mont.;* by the Rev. M. J. Berkeley, M.A. On Oligoneuria rhenana; by Dr. L. Imhoff: extracted from the Bericht Verh. Nat. Ges. 1852, p. 177.

The papers in No. 74 are thus intituled: —

'Monograph of the British Graphideæ.' By the Rev. W. A. Leighton, B.A., F.B.S.E.

'Characters of a new European Pupa, and of a new Australian Bulimus.' By W. H. Benson, Esq.

'A Catalogue of the Species of Ants found in Southern India.' By T. C. Jerdon, Esq., Assistant Surgeon Madras Medical Establishment.

'Note on the Greenland and Iceland Falcons.' By John Hancock, Esq.

'On the Structure of the Echinoderms.' By Johannes Müller.

'Notes on the Ornithology of Ceylon, collected during an Eight Years' Residence in the Island.' By Edgar Leopold Layard, F.Z.S., C.M.E.S.

'On the Mechanism of Aquatic Respiration, and on the Structure of the Organs of Breathing in Invertebrate Animals.' By Thomas Williams, M.D., Lond.

'Catalogue of Reptiles collected in Ceylon.' By E. F. Kelaart, M.D., F.L.S., &c.

Proceedings of Societies: — Zoological.

Miscellaneous: — Note on the Bird of Paradise, (*Paradisea Apodus*); by M. de Lafresnaye: extracted from the 'Revue et Magasin de Zoologie,' 1853, p. 339. New Observations on the Development of the Intestinal Worms; by Prof. Van Beneden: extracted from the 'Comptes Rendus' for November 21, 1853, p. 788. Further Observations on the Animal Substance analogous to Vegetable Cellulose; by M. Virchow: extracted from the 'Comptes Rendus' for December 5, 1853, p. 860.

We need only allude to one of these papers, that by Mr. Hancock. This ornithologist published an opinion that two very similar species of Falco were, by many naturalists, included under the name of Falco Islandicus; these are characterised as the Greenland falcon (*Falco Grœnlandicus*), and the Iceland falcon (*Falco Islandicus*): both of them are usually included by English ornithologists under the name of gyr falcon or jerfalcon. In 1838, Mr. Hancock entered fully into the question of plumage, as far as he was then able to decide on such differences as age, sex, season, and casual aberration might be supposed to produce. Whether his conclusions were drawn from true premises at that time, the following passage in the present paper will show: —

"When I drew up my paper, I considered all the white birds from Greenland to be mature, describing the nest-plumage from a dark specimen, which, having a white quill-feather coming, seemed to prove that it was the young of this species. There is now no doubt that this is wrong, and that this individual is really an immature Iceland falcon, the white quill-feather being abnormal."—P. 110.

Nothing daunted by this error, thus honourably acknowledged, Mr. Hancock's general conclusions are the same now as in 1838; but he closes his paper with a paragraph that somewhat startles us: —

"In conclusion, it may be stated that the characters of the two forms *are permanent* and sharply defined, *never blending into each other;* and that the young, as well as the mature birds, can always be distinguished. But whether these two falcons are to be considered *distinct species or mere races,* must depend upon the views entertained regarding what is to constitute specific character."—P. 112.

So that after all the pains which the author has taken; after he has imposed names and defined characters; after he has positively stated that the characters are *permanent* and *never blending;* and that individuals, young or old, may *always* be distinguished, we are told that the reception of the two as species, is to depend on our own option in settling what a species really is.

Birds of Paradise in confinement. — "A rich colonist at Batavia kept a number of rare birds in confinement, and amongst them several pairs of birds of Paradise. A captain who visited this colonist was much struck with the way in which the males displayed themselves before the females. By means of a sort of vibration of their entire plumage, they raised all the feathers, including their long plumes, and surrounded themselves completely, so as to form a sort of halo, in the centre of which the bright green head formed a disk, which at the moment looked like a little emerald sun, with its rays formed by the feathers of the two plumes. He had no doubt that this action, which was frequently repeated, was intended to please the females, as is remarked in all birds the males of which are furnished with ornaments."—P. 157.

No. 75 contains the following papers : —

'Contributions to the Palæontology of Gloucestershire : a Description, with Figures, of some new Species of Echinodermata from the Lias and Oolites.' By Thomas Wright, M.D., &c.

'Descriptions of some newly discovered Species of Araneidæ.' By John Blackwall, F.L.S.

'On the Mechanism of Aquatic Respiration, and on the Structure of the Organs of Breathing in Invertebrate Animals.' By Thomas Williams, M.D. Lond.

'Description of a new Genus and Species of Seal (*Heliophoca Atlantica*) from Madeira.' By Dr. J. E. Gray, F.R.S., V.P.Z.S.

'Monograph of the British Graphideæ.' By the Rev. W. A. Leighton, B.A., F.B.S.E.

'Notes on the Ornithology of Ceylon, collected during an Eight Years' Residence in the Island.' By Edgar Leopold Layard, F.Z.S., C.M.E.S.

Bibliographical Notice : — 'Symbolæ ad Monographiam Marseniadarum.' Auctore Rudulph Bergh.

Proceedings of Societies : — Zoological—Botanical of Edinburgh.

Miscellaneous : — On Sciurus glacialis (*Læmargus borealis,* Müll. & Henle) and its Parasites ; by P. J. Van Beneden : extracted from the 'Bulletin de l'Académie Royale de Belgique,' 1853, No. 2, p. 258. On the Genus Latia ; by Dr. J. E. Gray, F.R.S., &c. The Anglesea Morris, (*Leptocephalus Morrisii*) ; by C. W. Peach. Figured Pearls of the Chinese ; by Dr. J. E. Gray, F.R.S. &c. On a Migration of Dragon-flies ; by M. C. Morren : extracted from the 'Bulletin de l'Académie Royale de Belgique,' 1853, No. 2, p. 323.

Mr. Layard's paper on the birds of Ceylon is as interesting as ever, but far too long for the pages of a monthly Magazine : and the same observation applies with still greater force to several other papers, which are continued from month to month. We give an extract from Mr. Layard's paper, to show how pleasantly he writes.

The Hooded Crow of Ceylon. — "The hooded crow (*Corvus splendens*) is essentially a 'cit;' he is never found away from towns, and the denser the population the more frequent is he. He builds his nest in the Hibiscus trees in the court-yard of the Government-house, or of the merchants' store; and, while in these situations the windows of his white fellow-citizens often overlook his domestic arrangements; he, in turn, from his eyrie on the top of the rocking palm, looks down upon the lowly huts of the black ones. He levies contributions on all alike: leave but your breakfast-table for a moment, and as you return, the rustle of hurrying wings, the marks of many feet on the white table-cloth, the gashes in the pat of butter, and the disappearance of plantains and small viands, proclaim who have been the robbers. The old 'hopper-woman' sits frying her cakes under the lowly 'pandal' of her cadjan hut, and over her, with head inclined, taking a bird's-eye view of her cookery, sits the 'caca;' and now the '*appah*,' Anglicè 'hopper,' is done, lifted from the pan, and laid upon the little circular basket ready for a customer. With a grunt of satisfaction the aged crone surveys her handiwork, and drops her spoon to feel for her beloved betel-pouch; a tiresome little bit of 'areca-nut' has got into a corner, and the old dame bends over it, unmindful of her charge, a dark figure drops from the roof, and though she is instantly on the alert, and aims an ineffectual blow at the thief, the nice white 'appah' is borne off. Sometimes, however, the robber has but a poor hold on it and drops it on the red cabook road; down pounce a host of crows that have been looking on from many a tree, and a scuffle ensues; but anxious at least to cheat them of their booty, if not to retain the damaged article for her own eating, the old woman hurries to the rescue; but this makes matters worse, the castle is defenceless, and unseen foes drop down from beam and rafter or fly in through open doors. The rice-basket is invaded, the chilli-box overturned, the dried fish stolen, and lucky is the dame if the crash of most of her little store of crockery and glass, swept to the ground and scattered in shining fragments, does not hastily recall her to her hut.

"But in spite of these annoying thefts, the amount of good done by the vast numbers of these birds which frequent our towns is very great: they are the great street-scavengers; nothing escapes their quick eyes; everything that can be eaten is devoured as soon as discovered, and early and late they are on the watch for whatever is thrown out: and so nimble are they, that I have frequently seen them catch small bits of carrion, or other matters, before they fell to the ground. They have not the least fear of the natives, and even European children are unheeded by them; and I have seen my boy's hand bitten and bleeding from their attempting to snatch his bread from him. But of the white man and his gun they entertain the most wholesome dread. Point but a stick at one and away it flies, while yet two or three hundred yards distant, and alarms the whole winged fraternity with his cries. Crows flock from all quarters, and, sailing high in air, caw in concert till the object of their dread has disappeared. However, should one unwary bird fall before the gun, his companions hasten to assist him, and will often raise him up, and fly so heedlessly round the head of the fowler, that a dozen perhaps may be shot before the remainder, conscious of their danger, seek safety in flight. Their nests are loose structures of sticks lined with hair, built in cocoa-nut or other trees, and the eggs are 1 inch 7 lines long by 1 inch 1 line broad. The general colour is a light bluish green, mottled more sparingly than those of the carrion crow with dark brown, the markings also being at the obtuse end; but in these particulars considerable variation occurs in both species, and I have some eggs in which the markings are almost obsolete."—P. 214.

'*The Natural History Review.*' January, 1854: 40 pages 8vo. Price Six Shillings a-year. Dublin: Hodges and Smith. London: Simpkin, Marshall, & Co.

We shall probably ere long have an opportunity of announcing more confidently than we can at present, those particulars concerning this new undertaking for which every Magazine and book buyer will at once ask. For instance: — How often will it appear? Has it a fixed periodicity, or an erratic course? What is the price of each number? Is this the first of a series? What is its object? Is it to be confined to reviews and reports of Societies, as in the present instance, or is to embrace the whole range of Natural History? As the book is kindly transmitted to us for review, we would gladly give all the information in our power respecting it; more especially as we cannot, with any propriety, review a review, or criticise the authorised reports of scientific Societies. The work, in fact, takes so nearly the same ground as the 'Zoologist,' that it were scarcely seemly on our part to pen a single sentence that might even appear to blame, lest it be thought that we were suffering under a nervous apprehension of troublesome rivalry; whereas nothing can be more gratifying than the manner in which the 'Zoologist' is spoken of in the new journal: if the publication of such a journal could occasion the slightest sore, the balm of its editorial approbation must effectually heal the wound.

'*Shells and their Inhabitants. The Genera of Recent Mollusca arranged according to their Organization.*' Parts VIII.—X. London: Van Voorst. December, 1853. Each Part contains 32 pages of letter-press; price 2*s.* 6*d.* Demy 8vo. plain, 5*s.* Royal 8vo. coloured.

PART VIII. comprises the following genera: — Terebra, *Adanson;* Pusionella, *Gray;* Pyramidella, *Lamarck;* Obeliscus, *Humphrey;* Turbonilla, *Risso;* Odostomia, *Fleming;* Eulimella, *Forbes;* Aclis, *Lovén;* Monoptygma, *J. Lea;* Eulima, *Risso;* Niso, *Risso;* Leiostraca, *H. and A. Adams;* Stylifer, *Broderip;* Cerithiopsis, *Forbes & Hanley;* Architectonica, *Bolten;* Torinia, *Gray;* Philippia, *Gray;* Omalaxis, *Deshayes;* Discohelix, *Dunker;* Conus, *Linneus;* Nubecula, *Klein;* Dendroconus, *Swainson;* Leptoconus, *Swainson;* Cylinder, *Montfort;* Hermes, *Montfort;* and Deraphus, *Philippi.*

Part IX. comprises the following genera: — Strombus, *Linneus;* Harpago, *Klein;* Gladius, *Klein;* Terebellum, *Klein;* Cypræa, *Linneus;* Aricia, *Gray;* Luponia, *Gray;* Cypræovula, *Gray;* Trivia, *Gray;* Amphiperas, *Gronovius;* Calpurnus, *Montfort;* Cyphoma, *Bolten;* Volva, *Bolten;* Simnia, *Risso;* Pedicularia, *Swainson;* Cancellaria, *Lamarck;* Admete, *Kroyer;* Trichotropis, *Broderip & Sowerby;* Aporrhais, *Aldrovandus;* Struthiolaria, *Lamarck;* Halia, *Risso;* Cerithium, *Adanson;* Vertagus, *Klein;* Colina, *H. & A. Adams;* Bittium, *Leach;* Triphoris, *Deshayes.*

Part X. comprises the following genera: — Lampania, *Gray;* Tympanotonus, *Klein;* Pyrazus, *Montfort;* Telescopium, *Chemnitz;* Cerithidea, *Swainson;* Tiara, *Bolten;* Melanella, *Swainson;* Melanoides, *Olivier;* Ceriphasia, *Swainson;* Pachycheilus, *Lea;* Io, *Lea;* Melania, *Lamarck;* Hemisinus, *Swainson;* Vibex, *Oken;* Gyrotoma, *Shuttleworth;* Tricula, *Benson;* Leptoxis, *Rafinesque;* Pyrgula, *Christie & Janson;* Melanopsis, *Ferussac;* Faunus, *Montfort;* Clionella, *Gray;* Littorina, *Ferussac;* Tectarius, *Valenciennes;* Echinella, *Swainson;* Modulus, *Gray;* Risella, *Gray;* Lacuna, *Turton;* Fossar, *Adanson;* Isapis, *H. & A. Adams;* Lithoglyphus, *Mullfeldt.*

PROCEEDINGS OF SOCIETIES.

ENTOMOLOGICAL SOCIETY.

March 6, 1854.—E. NEWMAN, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be given to the donors: — The 'Zoologist' for March; by the Editor. The 'Athenæum' for February; by the Editor. The 'Literary Gazette' for February; by the Editor. The 'Journal of the Royal Agricultural Society of England,' Vol. xiv. part 2; by the Society. 'Revue et Magasin de Zoologie,' 1853, No. 9; by the Editor, M. Guérin Méneville. 'Proceedings of the Royal Society,' Vol. vi., No. 101; by the Society. 'Synopsis des Caloptérygiènes,' par M. Edm. de Selys-Longchamps: Bruxelles, 1853; by the Author. 'Journal of the Society of Arts' for February; by the Society.

Election of Members.

Charles Melley, Esq., Liverpool, was elected a Member; and S. C. Tress Beale, Esq., Ivy Court, Tenterden, was elected a Subscriber.

The Society's Excursions.

It was announced that the Society would make two excursions this year, one on the 10th of June, to Pembury, near Tunbridge, the other on the 8th of July, to Mickleham. Tickets for dinner, on either occasion, may be obtained by Members, for themselves or friends, of the Officers of the Society, at 2s. 6d. each, up to the 2nd of May; and after that day, at 3s. 6d. each.

Exhibitions.

Mr. Stevens exhibited specimens of the new British Zygæna Minos, taken last June, near Galway, by Mr. Henry Milner. He also exhibited some Coleoptera and Lepidoptera, just received from Mr. Fortune, in the North of China, several being remarkable from their great similarity to British species; and he also exhibited some Lepidoptera, including some Micros collected by Herr Guenzius at Port Natal.

Mr. Stevens exhibited the fine specimen of Morpho Cyperis, presented to the Society by Mr. T. J. Stevens, which had become saturated with grease, and was now quite restored by means of camphine and magnesia.

Mr. Moore exhibited a mud nest of a mason bee or wasp, containing several cells, in one of which he found a Chrysis, in another a wasp, and in a third part of a spider, all of which had probably entered after the builder of the nest had left it. The nest was found on a wall at Dacca, in India.

Mr. Curtis exhibited the following larvæ, which he intends to describe for a future meeting:—Larva of a Harpalus? of Stenolophus vaporariorum? Cistela (Prionychus) ater, Prostomis mandibularis, Helophorus? (alive at the end of two years), Pyralis (taken feeding on insects in a cabinet).

Mr. Foxcroft exhibited living specimens of Boletophagus crenatus, and the larvæ, also larvæ of a species of Tinea, probably pellionella, which had fed upon, and formed their cases of, hartshorn shavings.

Varieties of Lepidoptera taken near Ipswich.

Mr. Curtis, referring to the curious varieties of two species of Argynnis, captured near Ipswich, which were exhibited at the last meeting, said that that locality seemed prolific in curious varieties, for he had seen several of various Lepidoptera taken there. Mr. Desvignes also made a similar statement.

Capture of Hemerobius dipterus.

The President announced the capture by Mr. Dale, at Langport, in Dorsetshire, of Hemerobius dipterus. This insect was previously known as German, but not as British, and adds still another to the interesting contributions made to British Entomology by this most indefatigable and successful collector. The species was first described from a German specimen, in Burmeister's 'Handbuch der Entomologie,' vol. iii. p. 973; and a second time by Mr. Walker, in the 'Catalogue of Neuropterous Insects in the British Museum,' part iii. p. 298.

Works on Zoology and Geology.

The President said that he had again been requested to state, that Sir William Jardine would be happy to receive any additions, from authors of works on Zoology and Geology, to the lists of their writings already sent in for publication by the Ray Society; the appearance of this bibliographical volume having been delayed by the untimely death of the lamented Mr. Strickland, to whom it had been entrusted.

Insects of Moreton Bay.

The President mentioned that he had received a communication from Mr. Rawnsley, offering to collect insects for the Society, or any of its Members, at Moreton Bay, in New South Wales.

Larva of Monodontomerus.

Read, a letter from G. Newport, Esq., F.R.S., &c., controverting at great length some of the statements of Mr. F. Smith respecting Monodontomerus, published in the 'Transactions' of the Linnean and this Society, and claiming the prior discovery of the larva.

Mr. Smith briefly replied that he had nothing to retract, and was content to abide by his former statements.

Phosphorescence of the Larva of an Insect.

The following paper was read: —

"Observations on the Phosphorescence of the Larva of an Insect." By J. Reinhardt. Read before the Association of Naturalists at Copenhagen, at the meeting on the 18th of February, 1853.*

"In April, 1852, on arriving towards the conclusion of my stay at Lagoa Santa, the larva of an insect, an inch and a half long, and emitting a strong light of a very peculiar kind, was brought to me, having been caught in a house just as it was creeping out from under a piece of timber lying in a passage. It had been seen the evening before, but had escaped before any one could muster up courage to lay hold of it. None of the inhabitants of the village to whom the animal was shown knew anything about it; though it cannot be of particularly rare occurrence in that part of Brazil, because I have heard, from an amateur of Zoology from Sabara, that he had met with it several times in that town.

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* Translated from the Danish by Dr. Wallich, F.R.S., V.P. Linn. Soc.

"The peculiarity in its luminous property consists in its producing two distinct sorts of light; for while all the segments of the body, with the exception of the prothorax, are each furnished on the dorsal side with two shining points radiating a greenish light, like that which we see in our glow-worm and similar forms, the whole of the head, excepting the eyes, antennæ, and the parts of the mouth, glows like a live coal, with the most vivid intensity, strikingly contrasting with the greenish luminous dots of the rest of the body. It is not, however, by the colour alone, and the locality of the light, that the animal becomes remarkable, and, so far as I know, unique among insects; but it appears moreover to be permanent: for, although it alternately diminishes in intensity, being at times scarcely observable by lamp-light, it is at other times quite distinct, nay, occasionally visible at mid-day; yet, during the whole of the twenty-four hours in which the insect continued alive with me, it never once lost its luminosity, and the decided alternations in the intensity were but little appreciable in the dark. Again, the greenish light of the segments contrasts with that which issues from the head, by fading and becoming perfectly imperceptible, and then again reviving, as is seen in the Lampyris; it frequently vanishes and becomes extinct in some of the segments, while in others it continues bright. It is rarely that the light is extinguished in all the segments simultaneously, and, on the whole, it is more nearly continuous than in the kind of insects just mentioned. The radiation takes place from the dorsal parts of the rings, behind and above the spiracles, without having apparently any absolute connexion with them, for it is seen also in segments wanting the spiracles, that is, in the mesothorax and last abdominal ring. The lucid points are of the size of the head of a small pin, and the light is so intense that it shines through the sides of the abdomen: when it ceases, no particular appearance is observable at the place whence it issued; and, unlike the luminous spots on the thorax of the shining Elaters, it is neither sharply defined, nor, in general, remarkable by any peculiar appearance; and on the larva being put into brandy, the red light was extinguished first, and then the green.

"I have in vain searched for any notice of such a larva in entomological works; neither is it mentioned in Ehrenberg's known memoir on the luminosity of the sea, prepared, no doubt, from the most extensive information upon all known phenomena of phosphorescence. I may therefore assume that the peculiar light in question has not hitherto been known to zoologists; although a short notice, giving the main features of the phenomenon quite correctly, but unaccompanied by any adequate account of the luminous animal itself, from the pen of F. Azara, appears in his 'Voyage dans l'Amérique Méridionale' (t. i. p. 114), wherein the author reports that at Paraguay he saw 'a worm of nearly two inches in length, the head of which glowed at night like a piece of burning coal, and having besides along the body, on each side, a row of holes resembling eyes, from which a fainter yellowish light emanated.' This accords, in all essential points, so entirely with what I observed myself, that I must consider the little discrepancy of the holes themselves being luminous, as depending simply on a less attentive examination; and I am therefore of opinion that there can scarcely be a doubt of the Paraguay worm being identical with, or at all events nearly allied to, that which I obtained at Minas.

"There cannot be a doubt of this larva being that of some Coleopterous insect, but of which it is impossible for me to say. It seems probable that the strong phosphorescence does not entirely cease with that stage, even although it should become more or less modified afterwards; and it may therefore be hoped that the property may lead to the discovery of the perfect insect. But although I have been collecting the Fauna of that part of the Brazils inhabited by this larva, through all seasons and on a somewhat large scale, yet have I never met there with any other luminous insects than Elateridæ and Lampyridæ. To the larvæ of the first of these families it has no resemblance; but it undoubtedly has several features in common with the latter, and on the whole it has a stronger affinity with these than with any other form of larva with which I am acquainted; and yet, as will be seen from the subjoined description, it differs from the larvæ of the three principal genera of the family in some essential points: so that it still remains a question whether the perfect insect will be found to belong to the Lampyridæ.

"*Description.*—My specimen was a little smaller than Azara's, and measured 40 millim. in length, and about 5 millim. in breadth. Body flattened in such a way that the dorsal side is slightly arched, and separated by a margin from the more flat abdominal side. Hairs are scattered all over the body, but more sparingly on the upper than on the under side, and especially towards the edge, where they stand so close together as to give that part a villous appearance. The colour above is a dirty reddish brown, below yellowish white. The head is horny, protruding somewhat horizontally, without admitting of being retracted and hidden by the first thoracic segment: there is a sharp fold around it, which gives the anterior part an appearance of extending from the hinder portion as from a sheath, and conceals the articulation of the lower parts of the mouth: on each side is one eye only, though rather large, placed inconsiderably before the fold just mentioned, and directed laterally and somewhat forward: before it are the palpi, which consist of four joints, the outermost being very short, and much thinner than the preceding ones. The structure of the mouth seems to indicate that the larva is of predaceous habits, which agrees also with the nocturnal life it appears to lead. The much-curved jaws are thick at their base, becoming rapidly attenuated towards their tips, without being terminated by a fine point; on their inner margin they bear only a small knob or obtuse tooth, and, when closed, they cross each other at the apex. There is an upper lip between the jaws, hardly large enough to fill the entire space between them, and therefore easily overlooked; its outer margin has a slight incision in the middle. The lower parts of the mouth, the jaws, and the under lip, are grown together with the extraordinarily developed basal joint, into a large plate, on which two deep furrows alone point out the limits of the lip and jaws: from the anterior margin of this plate, quite towards the sides, originate the maxillary palpi, which are cylindrical, short in comparison with their considerable thickness, and consist of four joints, the outermost being terminated by a slightly arched, cutaneous, and soft lamina, strongly contrasting with the other (brown) part by its whitish colour: close within these is the two-jointed maxillary lobe, almost concealed by the palpi, which are many times larger; and in the middle is seen what I think is properly the tongue, which is narrowest at its origin, widening towards the insertion of the two-jointed lingual palpi, and protruding between these with a little triangular elongation, bearing two brushes at its apex. There are twelve joints in the body, besides the horny anus, which protrudes like a thirteenth joint: they are hard and horny, except on the under side of the pectoral portion, and especially the metathorax, where the joints are partially soft and skin-like. The first thoracic segment is larger than the other two, and on its abdominal side is marked with a deep incision, like a V, in which almost the entire under side of the head is uncovered and visible, while, on its back, the head has its posterior part covered by the prothorax. The legs are long and strongly developed, whence the motions of the animal are proportionably rapid. The coxa tends obliquely inward and backward, and lies close to the body; it is cylindrical in form, rather long, and movably connected with the femur, which, although stouter, is not longer than the tibia: the foot consists of a single, long, very pointed, but slightly curved claw. Of the segments of the body, the first four are of nearly equal length, but are perceptibly shorter than the last five, and these again differ slightly amongst themselves: the abdominal portion of the first eight segments is divided into five parts by means of four furrows, of which parts the middle one is broadest, the two on each side narrower; or it may be thus stated:—The ventral portion of the body is covered, not as on the back, by one, but by five horny shields. The spiracles are nine in number on each side; the foremost on the under side of the mesothorax, close to the anterior margin of this segment; the remaining eight on the eight first segments of the abdomen, where they are situated on the dorsal shield, directly below the edge, where it bends towards the ventral side."

Bombyx Cynthia.

Mr. Spence communicated the following extract from the 'Journal of the Society of Arts,' February 24, 1854: —

"Col. Sir William Reid, Governor of Malta, has forwarded to the Society of Arts, through the Colonial Office, a communication in which he states, that after many failures, through the very laudable and persevering efforts of Mr. Piddington, of Calcutta, with the aid of the Directors of the Peninsular and Oriental Steam Packet Company, he has received some sound eggs of the Indian silk-worm (*Bombyx Cynthia*), called by the natives of Assam 'Eria,' and which feed on the leaves of the castor-oil plant. Of the eggs received about five hundred have hatched, and the worms, after undergoing two mutations, still appear to be in a very healthy state, feeding only on the castor-oil plant. Mr. Piddington had, for some time previously to Sir William Reid's arrival in Malta, been striving to convey this silk-worm to the Agricultural Society of Turin, as they wish to introduce it into Italy; it will be his first duty, if he succeeds, to send it there."

Sir William Reid has also inclosed some copies of an account of the Assam silk-worm, which have been published in the 'Journal of the Society of Arts of March 3rd. The following are extracts: —

"It is stated by Dr. Helfer that 'the Eria is reared over a large part of Hindostan, but more extensively in the districts of Dinagpur and Rangpur, in houses, in a domesticated state, and feeds chiefly on the leaves of Ricinus communis. The silk of this species has never been wound off, but people are obliged to spin it like cotton. It gives a cloth of seemingly loose coarse texture, but of incredible durability, the life of one person being seldom sufficient to wear out a garment made of it, so that the same piece descends from mother to daughter. It is so productive as to give sometimes twelve broods of spun silk in the course of a year. The worm grows rapidly, and offers no difficulty whatever for an extensive speculation.'

"'On account of the double profit that would be derived from the same area of land by cultivating it with the castor-oil plant, which produces oil and feeds the worm, an extensive cultivation of this species would be highly recommendable; and if, also, the cloth is of the coarsest nature, it is, on the other hand, very valuable on account of its durability. May it not be particularly well adapted to mix in certain textures with cotton?'

"Dr. Helfer estimates that there are not less than a hundred and fifty species of moths in India [the larvæ of] which form cocoons more or less adapted for use in manufactures. He adds,—'Many have made the objection that the silk of the Indian species is much inferior. This is yet an undecided question. The mulberry silkworm degenerates if not properly attended to. What has been done to raise the indigenous species from the state of their natural inferiority? Very much depends upon the cultivation of the worms in houses; secondly, on the method of feeding them, selecting not that vegetable substance which best gratifies their taste, but that which contributes to form a fine cocoon; and, thirdly, from the first chemical operations employed before the working of the rough material. But even if the raw material would not be capable of a higher degree of cultivation, the demand for it would, notwithstanding, never cease in Europe. All the silk produced in Hindostan has hitherto found a ready and profitable market in Calcutta, and the demand is always greater than the supply.'"
—*J. W. D.*

ZOOLOGICAL SOCIETY OF LONDON.

Secretary's Report, February 28, 1854.

THE number of visitors to the Gardens, not being Fellows of the Society, has exceeded all precedent, with the exception of the year of the Great Exhibition. But it is a remarkably interesting fact, that no single day even in that memorable summer approached the spectacle which was witnessed on Whit Monday last, when upwards of 22,000 persons paid for admission to the Society's collection. Although this vast multitude necessarily embraced many grades of the population, it is a most gratifying fact, which deserves to be recorded, that not a single instance of misconduct in any shape occurred during the whole day: but, on the contrary, the general character of the assemblage was that of earnest and intelligent enjoyment.

It must be regarded as a subject of the highest congratulation to the Society, that their establishment has fixed itself in this practically useful manner upon the public mind; and the effect thus produced by it ought to stimulate to still further successes.

Aquatic Vivaria.

The principal new work of the year has been the arrangement of living fish, Mollusca, zoophytes, and other aquatic animals, first projected in 1851, which has probably excited more attention from its novelty and the intrinsic beauty of the objects themselves, than any other of the recent additions to the collection.

Although the series of tanks is limited to a length of 84 feet by the present extent of the building in which they are placed, an immense number of species have been exhibited in them, and it is a satisfactory proof of the control under which the method of management has been reduced, that there are at this moment several of the fish and zoophytes in the tanks which were placed there in May last; and, in the case of the fish more particularly, several others which formed part of the number experimented on in 1852.

The fish have spawned, and the zoophytes have produced their young in considerable abundance.

Algæ are growing luxuriantly in those tanks which are not agitated by the vivacious evolutions of the sea-fish, and this secondary feature is well worth the attention of botanists, to whom the opportunities thus afforded of studying the development of these plants are of the most complete character; while the extremely beautiful effect of colour, dependent partly on the Algæ themselves, and partly on the peculiar action of transmitted light, are not less instructive to the artist.

The present arrangement of the house consists of six tanks of freshwater animals, chiefly fish, on the western side; and seven of marine animals on the eastern side; exclusive of several movable tanks of smaller size, which are placed as occasion requires in various parts of the central area.

The zoophytes which are most attractive in appearance are the Actinias or Sea-Anemones. The finest examples of them are to be found in tanks 9, 10, and 11, in which every age of these curious animals is well illustrated.

A good illustration of that most singular fact in the physiology of zoophytes, the alternation of generations, is at present afforded here by the appearance of the detached young of Campanularia which appeared for the first time on the 9th of February.

The Crustaceans have been represented throughout the year by several of the smaller British species, among which the young of the hermit crab have also recently appeared in considerable numbers.

None of the Mollusca which have been obtained are more interesting or have lived more successfully than the species which belong to the Nudibranchiate genera, Æolis and Doris.

Ribands of spawn have been deposited by the last-named, and as the water in which they live is never disturbed, there is very little doubt that the whole existence of these animals will be here subjected to observation. The elaborate monograph of Messrs. Alder and Hancock, published by the Ray Society, facilitates the study of this group in the most delightful manner, and places a complete knowledge of it within the reach of every one who chooses to consult their work.

The curious group of Ascidian Polypes (which take an intermediate station between zoophytes and Mollusca) have been copiously illustrated, frequent specimens of Botryllidæ, or compound Ascidians, of Ascidiadæ, or simple Ascidians, having been received, although from their sluggish leathery appearance they may not have attracted so much attention as their peculiar organization deserves.

Giant Anteater.

Among the Mammalia, nothing can be more interesting than the giant anteaters (*Myrmecophaga jubata*), of which the first adult specimen was obtained in September last. The nearest existing analogue to the Great South American Edentata of the Palæozoic periods, the most singularly organized animal of the whole group to which it belongs,—the anteater of Brazil, had long been one of the most important desiderata to the collection. With the exception of two very young specimens received by the late Earl of Derby, the anteaters now in possession of the Society are the first which have reached England alive; and as, from the period of the year, it has been impossible for many of the Fellows to have had an opportunity of visiting the Gardens since their arrival, there is no doubt that a great share of attention will now be given to these animals.

All the experiments which were tried, in the first instance, to find an artificial substitute for the Termites having failed, it became very doubtful whether so singular a rarity could be preserved during the winter. The treatment which Azara mentions as having been practised with the animals formerly sent to Madrid, has at last proved so far successful as to make it probable that the anteaters will survive in their present quarters.

It may be useful to mention here that they retain much of the nocturnal habit of the species, and are, consequently, more often seen to advantage towards the close of the afternoon than at any other period of the day.

Lions.

The latest arrival at the Gardens, which deserves especial mention, consists of a pair of Asiastic lions (*Felis goojeratensis*, Smee), captured by the Nawab of Janaghar, and obtained from him by Sir Thomas Erskine Perry, formerly Chief Justice of Bombay, who brought them down to Bombay at his own cost, and then most liberally presented them to the Society.

Sir Henry Leake having, with generous anxiety to assist in the furtherance of Sir Erskine Perry's design, transmitted them to Suez, they were conveyed through Egypt under very favourable arrangements with the Directors of the Peninsular and Oriental Steam Navigation Company, whose extreme care the Society has had to acknowledge on many previous occasions.

The Asiatic lion affords many important considerations to the naturalist, for which I may refer to Captain Smee's paper upon this animal in the first volume of the Society's 'Transactions.'

The gradually approaching extinction of this noble animal in Northern India had, therefore, rendered it extremely desirable that an opportunity should be afforded us of studying the differences reported to exist between it and its African congener, when Sir Erskine Perry applied his influence to obtain living specimens for that purpose. The difficulties which have presented themselves in the enterprise which has now been so successfully concluded, render it very improbable that any subsequent attempts will be made in the same direction: and it is not too much to assert that Sir Erskine Perry has thus put the Society in possession of another of those characteristic rarities which are likely to remain unique in our collection.

These lions are attended by an aged native soldier, who has had charge of them from their capture, and exerts very extraordinary controul over their temper.

Three lion cubs have been born in the Menagerie in the course of the winter, and will be exhibited as soon as suitable accommodation can be prepared for them.

Antilopes.

In the general collection no greater progress has been made than with the antilopes, among which the most conspicuous fact is the probable acclimatization of the eland (*Boselaphus oreas*). It will be remembered that, by the bequest of the late Earl of Derby, the Society became possessed of two males and three females of this noble species at the close of the year 1851. Of these one female was adult, having been bred by his lordship at Knowsley in 1844; the others were scarcely a year old, having been then recently imported as fawns.

The three females have this year produced a male and two female fawns, all fine and perfectly developed animals, thriving as well as calves of the most highly bred cattle would do at the same age. If equally successful in the current year, the original herd will have doubled itself before the expiration of the next twelve months.

As the amount of protection which the eland requires in this country is scarcely more than is ordinarily given to the most valuable agricultural stock, there appears to be no difficulty whatever, if the subject is taken up by proprietors who have the requisite facilities, in the way of introducing a new and a most valuable venison into our parks. The magnificent character of this species, and the weight which it attains, is beginning to manifest itself in the oldest bull, who is, however, far short of maturity. A few minutes given to this extraordinary animal, which has been removed to the Wapiti-house (No. 58 in the plan), will satisfy any one of its beauty, power, and activity; while we have the concurrent testimony of every sportsman in Southern Africa as to the excellent quality of the meat as an article of food.

Of the other antilopes, the Leucoryx breeds freely, a third fawn having been recently produced by the female purchased at Knowsley.

The Society have, in addition, recently completed pairs of the Sing-sing and the Bubale antilope (*A. Bubalis*), each representing an important group in this graceful and interesting family. Through the exertions of the Hon. C. A. Murray and Mr. Grace, Her Britannic Majesty's Vice-Consul at Mogador, a male and two females of the Aoudad (*Ovis tragelaphus*), have been added to the collection, and there is therefore every prospect of continuing them, as well as the Egyptian Ibex (*Capra nubiana*), of which one kid has been already born.

Deer.

Among the deer there would be no difficulty in obtaining still greater success, if the Society possessed sufficient acreage to develope this section of the Vivarium.

The rein-deer presented by Mr. Domville and Sir Henry Hunloke in 1850, have not only lived in good condition to the present time, but have produced a pair of fawns which are equally thriving.

The female Wapiti, bred at Knowsley in 1842, has this year produced her fourth fawn, and as the Society retains two of them, it is now to be hoped that this commanding species, of which no other specimens exist in Europe, will increase with rapidity.

The Javan Rusa deer have also bred, and there is equal probability that the herd of this species will be further extended.

Ie is worth the attention of those Fellows of the Society who possess deer-parks, that, with ordinary attention, the following species in addition to the preceding, will breed and flourish in any favourable situation in the South of England, and perhaps in any part of the country: — Barasingha (*Cervus Duvaucellii*), India; Axis (*C. axis*), India; Hog deer (*C. porcinus*), India; Sambur (*C. hippelaphus*), India; Sambur (*C. unicolor*), Ceylon; Virginian deer (*C. virginianus*), America; Texan deer (*C.* —— ?), America; Long-tailed deer (*C. Lewisii*), America.

In fact, out of thirty-eight known species of deer, it is more than probable that twelve or fourteen might be placed in our parks without difficulty. The objection which has been raised as to the disagreement of the different species is necessarily theoretic; and we may presume that it is, at least, not likely to be a serious obstacle, when we see the perfect accord in which fallow deer and red deer are associated in Richmond and Windsor Parks, as well as in many other instances.

Llamas.

Considerable interest having of late years been attached to the genus Auchenia, the Council have collected a fine series of the animals of which it consists: of these the llama, alpaca, and guanaco have bred freely, and had there been sufficient accommodation for them, three very beautiful herds might have been formed from the present stock.

It may be remarked here that pure guanacos are seldom met with in collections; and those bred by the Society are probably the first which have been produced in Europe. It is gratifying to think that, as they have been purchased by Lord Hastings, there is every chance of their being successfully continued at Melton Constable.

Miscellaneous.

The house formerly occupied by parrots (No. 27 in the plan) has been adapted for a class of animals for which there has hitherto been no adequate provision.

The various habits and organization of the smaller forms of Mammalia render it excessively desirable that more attention should be paid to them, and the present arrangement is therefore to be taken rather as a specimen of what may be done in that way, than as anything approaching a final arrangement. The advantage of the present system is well exemplified, however, by the Genets and the Nandinias, presented by Captain Sotheby, R.N. Next to these should be noticed Bassaris astuta, a rare and very interesting form from Mexico.

The Tayra is another American form, whose marten-like agility renders it always conspicuous. The Cape Hyrax, the congener of the animal which is designated as the "coney" in Scripture, finds a place in the same range of cages. On the opposite side will be found an extremely interesting series of Caracals; a pale and very beautiful male from India, paired with a deep red female from the Gambia; and a large grayish male from Nubia. The other cages are, for the present, occupied by Ocelots—a section of Felidæ which has not yet been thoroughly discriminated.

The monkey-house has been subjected to a course of cleansing and alteration which, in addition to increasing the accommodation, has rendered it infinitely more agreeable to visitors.

Among other additions to the collection, which the Council have in prospect, the arrival of a female Hippopotamus is to be expected in the beginning of summer, His Highness the Viceroy of Egypt having signified his intention of presenting to the Society an animal which, in accordance with his promise to the Hon. C. A. Murray, he has already caused to be brought into Lower Egypt for that purpose.

D. W. Mitchell, B.A.,
Secretary.

Occurrence of Limax Gagates near Torquay and at Killarney.—Soon after the notice of the occurrence of this slug in the neighbourhood of Tenby was sent (Zool. 4048), I received by post two more small specimens from my brother, Mr. John P. Norman, of the Inner Temple, which had been taken by him in a lane beyond Mr. Bartlett's farm, near Torquay. He also informs me that he found another specimen in the garden of the Lake Hotel, Killarney, last autumn. I believe this is a new Irish locality for it. The peculiarly contracted form of the posterior portion of this slug when at rest, as mentioned in my former notice, is well represented in Captain Brown's 'Illustrations of Land and Fresh-water Conchology,' pl. 25, f. 17, but the anterior part is not drawn so much contracted as I have noticed it. — *Alfred Merle Norman; Clevedon, February* 15, 1854.

Larva of a Tortrix? feeding on Poppy Seeds.—I wish to record the habits of a small larva which I have recently discovered; and which, on careful examination, appears to belong to the Tortricidæ, though I have not ascertained the genus. Having had occasion to use some capsules of the Papaver somniferum, which had been put away in a bag, I was astonished on opening some of them to find they had formed a nidus for these larvæ, which appear to be nearly full-grown. The body is of a dull white colour, with a few straggling hairs; head reddish brown, with a lighter band at the posterior portion; ventral feet lighter in colour than the body. These larvæ form cocoons of silk, covered on the exterior with seeds interwoven closely, with only one apparent orifice. These cases are not portable, but exchanged for fresh ones, as the larva increases in size, if I may judge from the number of empty cases. I should mention that only the seeds are devoured, the shell of the capsule being left untouched.—*J. R. S. Clifford; 21, Queen's Row, Pimlico, March* 11, 1854.

Note on Uloma cornuta.—I had some hundreds of Uloma cornuta, *Fab.*, sent me from Sunderland, where they had been found in a bakehouse, breeding freely amongst the partly dried dough of the baking-board. I kept them alive in a wide-mouthed bottle for some months, but they did not seem to like their quarters, and died by degrees, most likely from the paste becoming too dry. The most singular part of the matter was that the whole were females. A short time ago a Newcastle grocer brought me several specimens of the same species, which he found in a cask of tapioca. They consisted of males and females, in nearly equal proportions.—*Thomas John Bold; Angas Court, Bigg Market, Newcastle-upon-Tyne, February* 7, 1854.

Note on Ophiocoma neglecta.—I may further take the present opportunity of supplying this omission in my late enumeration of the Ophiuridæ of this part of the coast. It seems to be more uniform in its characters than most of the others, and quite corresponds with the account given by Professor Edward Forbes, in his beautiful and valuable publication on the Echinodermata.—*George Harris; Gamrie, Banffshire, February*, 1854.

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Entomological Society of London,

EXCURSIONS IN 1854.

SATURDAY, JUNE 10TH, TO PEMBURY, NEAR TUNBRIDGE WELLS, KENT.
SATURDAY, JULY 8TH, TO MICKLEHAM, NEAR BOXHILL, SURREY.
Both by South Eastern Railway Train, from London Bridge, at 9½ A.M.
DINNER ON JUNE 10TH, AT THE CAMDEN ARMS, PEMBURY;
DINNER ON JULY 8TH, AT THE RUNNING HORSES, MICKLEHAM:
At 4 P.M., precisely.

Tickets for Dinner, on each occasion (Wine not included), 2s. 6d. each, until the nd of May (after that date 3s. 6d. each), may be obtained by Members for themselves r friends, at the Rooms of the Society, 12, Bedford Row, or of any of the Officers.

⁂ It is requested that *ten days' notice* of intention of joining either Excurion, may be given to the Secretary.

TO ENTOMOLOGISTS.

MR. FOXCROFT begs to return his sincere thanks to the Trustees of the British Museum, the Nobility, Gentry, and Clergymen, and the Members of the Entomological Societies, for the patronage he has received for a number of years; and takes the liberty of informing them and others, that he intends collecting Insects during the whole summer of the present year (1854), in the best locality known in Scotland, which is round the Black Forest, Rannoch, Perthshire; commencing on the 6th of April, and collecting for six months.

Mr. F., to enable him to carry out this plan, wishes to raise a sufficient sum by Subscriptions of One Guinea; each Subscriber to be entitled to one specimen of every species collected during the season, which will be equally shared in November, on his return, by himself. Those Subscribers who are Coleoptera-collectors, will have all the choice and rare Beetles divided amongst them in the boxes; and those who are collectors of Lepidoptera, will have all the rare and best specimens of Moths and Butterflies divided among them. The specimens will be sent to the residences of the Subscribers; and the boxes containing them are to be returned or paid for.

Mr. F. hopes, by stopping in one locality in Scotland, to take such choice Insects, or some new specimens that may be rare, to afford an excellent opportunity to gentlemen to obtain what may be wanting for their Cabinets; also for Proprietors of Museums, and collectors of British Insects.

Persons wishing to become Subscribers, are requested to send their Subscriptions, by Post-office Order, or otherwise, by the end of March at the latest, to MR. JAMES FOXCROFT, 3, Union Yard, 191, Oxford Street, London. Post-office Orders to be made payable at 210, Oxford Street.

No person will be allowed to subscribe after the 6th of April; and no one will be considered a Subscriber until he has paid his Guinea.

A variety of British Insects always on sale. All kinds of Insect-boxes and Cabinets for Insects. Nets and Breeding-cages of all kinds, and Cabinets for Shells or Fossils made to order.

Mr. F. has just bred a quantity of Boletophagus crenatus, which are to be sold alive, at 2s. each.

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It is particularly requested that orders (accompanied by clear directions as to the mode of conveyance, and a Post-office Order or Stamps to the amount) be sent direct to the Agent, EDWARD NEWMAN, 9, Devonshire Street, Bishopsgate.

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Erratum.—In the Proceedings of the Greenwich Natural-History Society, in the March number, at page 4241, the characters of the Quadrumana should read thus:—
Catarrhini. Lowermost angles of the nostrils pointing *inwards.*
Platyrrhini. Lowermost angles of the nostrils pointing *outwards.*

BIRD'S EGGS.

MR. J. C. STEVENS will sell a COLLECTION at his Great Room, 38, King Street, Covent Garden, on Friday, the 7th of April, 1854, at 12 for 1 o'Clock. It includes a specimen of the Great Auk, and many rare Species of Vultures, Eagles, Hawks, Owls, Water Fowl, &c. Catalogues may be had by inclosing a stamped directed Envelope to Mr. J. C. Stevens, 38, King Street, Covent Garden.

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